WHAT IS CLAIMED IS:

1.   A method for modeling video network reliability, the method comprising:

obtaining historical data for multiple video conferences;

executing a modeling algorithm that produces a model representing the historical data;

analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences; and

configuring a video network to avoid at least one of the identified characteristics associated with undesirable outcomes.

2.   The method of Claim 1, wherein the operation of executing a modeling algorithm that produces a model comprises executing a decision tree algorithm.

3.   The method of Claim 2, wherein the operation of executing a decision tree algorithm comprises executing an ID3-based algorithm.

4.   The method of Claim 1, further comprising conducting a new video conference with the video network configured to avoid at least one of the identified characteristics associated with undesirable outcomes.

5.   The method of Claim 4, further comprising:

updating the historical data to create new historical data that includes values representing characteristics of the new video conference;

executing the modeling algorithm to produce a new model representing the new historical data;

analyzing the new model to produce a result; and

reconfiguring the video network according to the result.

6.   The method of Claim 1, further comprising:

evaluating the model to determine whether the model provides a desired level of efficacy; and

in response to determining that the model does not provide a desired level of efficacy, using a different modeling algorithm to produce a different model.

7.   The method of Claim 1, wherein:

the method further comprises building a training set from the historical data;

the operation of executing the modeling algorithm comprises applying the modeling algorithm to the training set; and

the operation of analyzing the model comprises:

deriving a rule set from the model; and

analyzing the rule set to identify the characteristics associated with undesirable outcomes for the video conferences.

8.   The method of Claim 7, wherein:

the historical data includes attribute values for attributes of each video conference and an outcome value representing an outcome for each video conference; and

the operation of applying the modeling algorithm to the training set comprises:

using the outcome values as categorical attributes for the modeling algorithm; and

using the attribute values as non-categorical attributes for the modeling algorithm.

9.   The method of Claim 7, wherein:

the operation of obtaining historical data for multiple video conferences comprises obtaining a first endpoint identifier, a first endpoint vendor, a second

5   endpoint identifier, a second endpoint vendor, and an outcome value for the multiple video conferences;

the operation of building a training set comprises including the first endpoint identifier, the first endpoint vendor, the second endpoint identifier, the second endpoint vendor, and the outcome value for the multiple video conferences in the

10   training set; and

the operation of executing the modeling algorithm comprises using the first endpoint identifier, the first endpoint vendor, the second endpoint identifier, the second endpoint vendor, and the outcome value for the multiple video conferences to produce the model.

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10.   The method of Claim 7, wherein:

the training set includes values representing a first set of attributes; and

the method further comprises:

evaluating the model to determine whether the model provides a desired level

20   of efficacy;

in response to determining that the model does not provide a desired level of efficacy, building a different training set that includes a different set of attributes; and

applying the modeling algorithm to the different training set to produce a different model.

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11. A program product for modeling video network reliability, the program product comprising:

a computer-usable medium; and

computer instructions encoded in the computer-usable medium, wherein the

5   computer instructions, when executed, cause a data processing system to perform operations comprising:

obtaining historical data for multiple video conferences; and

executing a modeling algorithm that produces a model representing the historical data, such that the model can be analyzed to identify one or more

10   opportunities for improving reliability of a video network.

12. The program product of Claim 11, wherein the computer instructions cause the data processing system to perform further operations comprising:

outputting results that reveal at least one of the opportunities for improving

15   reliability of the video network, such that a user can reconfigure the video network, based on the results, to improve reliability of the video network.

13. The program product of Claim 11, wherein the computer instructions cause the data processing system to perform further operations comprising:

20   analyzing the model to identify the one or more opportunities for improving reliability of the video network; and

automatically reconfiguring the video network, based on the identified opportunities, to improve reliability of the video network.

14.   The program product of Claim 11, wherein:

the operation of executing a modeling algorithm that produces a model comprises executing a decision tree algorithm.

5   15.   The program product of Claim 11, wherein:

the operation of executing the decision tree algorithm comprises executing an ID3-based algorithm.

16.   The program product of Claim 11, wherein the computer instructions cause the

10   data processing system to perform further operations comprising:

updating the historical data to create new historical data that includes values representing characteristics of a new video conference;

executing the modeling algorithm to produce a new model representing the new historical data;

15   analyzing the new model to produce a result; and

reconfiguring the video network according to the result to improve reliability of the video network.

17.   The program product of Claim 11, wherein the computer instructions cause the

20   data processing system to perform further operations comprising:

building a training set from the historical data;

executing the modeling algorithm by applying the modeling algorithm to the training set; and

deriving a rule set from the model, such that the one or more opportunities for

25   improving reliability of a video network can be identified by reference to the rule set.

18.   The program product of Claim 17, wherein:

the historical data includes attribute values for attributes of each video

conference and an outcome value representing an outcome for each video conference;

the modeling algorithm uses the outcome values as categorical attributes; and

the modeling algorithm uses the attribute values as non-categorical attributes.

19.   The program product of Claim 17, wherein:

the computer instructions cause the data processing system to obtain a first

endpoint identifier, a first endpoint vendor, a second endpoint identifier, a second

endpoint vendor, and an outcome value for the multiple video conferences;

the computer instructions cause the first endpoint identifier, the first endpoint

vendor, the second endpoint identifier, the second endpoint vendor, and the outcome

value for the multiple video conferences to be stored in the training set; and

the modeling algorithm uses the first endpoint identifier, the first endpoint

vendor, the second endpoint identifier, the second endpoint vendor, and the outcome

value for the multiple video conferences to produce the model.

20. A data processing system for modeling video network reliability, the data processing system comprising:

one or more processing units;

a computer-usable medium in communication with the one or more processing units; and

computer instructions encoded in the computer-usable medium which, when executed by the one or more processing units, cause the data processing system to perform operations comprising:

obtaining historical data for multiple video conferences; and

executing a modeling algorithm that produces a model representing the historical data, such that the model can be analyzed to identify one or more opportunities for improving reliability of a video network.